

VLSI Experiment

1. Intro to SPICE Simulator
 - a. Register Bridge
 - b. Diode Rectifier

2. Draw the DC characteristics of Nmos & Pmos Transistor
 - a. Transfer characteristics
 - b. Output characteristics

3. Draw the DC characteristics of Cmos inverter Transistor
 - a. Transfer characteristics
 - b. Output characteristics

4. Design and simulate a Cmos
 - a. NAND Gate
 - b. NOR Gate

5. Realize the following boolean expression using Cmos Logic
$$F=AB'+BC+C'A'$$

6. Design and simulate the following using CMOS-TG
 - a. AND Gate
 - b. OR Gate

7. Design a RC Filter & Perform the AC Analysis
 - a. $C=1 \mu$
 - b. $C= 1 \text{ n}$

8. Introduce White Noise in a non-inverting OpAmp